

CLAIMS:

1. A method of writing an information to an optical recording medium (50) by forming mark areas corresponding to a predetermined state of said information on a recording surface of said optical recording medium, said method comprising the step of adapting said forming step to modulate the shape of said mark areas in a predetermined manner so as to obtain incomplete mark areas which do only partly cover the area of the medium associated with the channel bit to be written.
2. A method according to claim 1, wherein said shape of said mark areas is modulated to obtain a reduced reflection at said mark area.
3. A method according to claim 2, wherein said mark area is a pit area, and a protruding portion is generated substantially in the center of said pit area.
4. A method according to claim 3, wherein the top region of said protruding portion is adapted to form a land level portion substantially in the center of said pit area.
5. A method according to claim 3 or 4, wherein the size of said protruding portion is adjusted based on the size of a total pit area formed by adjacent pit areas.
6. A method according to claim 1 or 2, wherein said mark area is a pit area, and a hole is generated substantially in the center of said pit area.
7. A method according to claim 6, wherein the size of said pit hole is adjusted based on the size of a total pit area formed by adjacent pit areas.
8. A method according to any one of claims 1 to 5, wherein said incomplete mark area is formed by a focussed electron beam or a focussed laser beam.

9. A method according to any one of claims 1 to 7, wherein said optical recording medium is a phase-change recording medium and said incomplete mark area comprises a small amorphous mark.

5 10. A method according to any one of the preceding claims, wherein said optical recording medium (50) is a two-dimensionally encoded medium.

11. A method according to claim 10, wherein said incomplete pit area is arranged in a hexagonal grid of a two-dimensional coding scheme.

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12. A method according to any one of the preceding claims, wherein said method is used for mastering a record carrier (50).

13. A method according to any one of the preceding claims, wherein said
15 information is a multi-level coded information and wherein said shape of said incomplete pit area is modulated in accordance with the level of said multi-level coded information.

14. A method according to any one of claims 1 to 12, further comprising the step
20 of forming a cluster pattern of said incomplete marks on each channel bit area and controlling the pattern in accordance with the level of a multi-level coded information.

15. An apparatus for writing an information to an optical recording medium (50)
by forming mark areas corresponding to a predetermined state of said information on a
recording surface of said optical recording medium, said apparatus being adapted to modulate
25 the shape of said mark areas in a predetermined manner so as to obtain incomplete mark areas which do only partly cover the area of the medium associated with the channel bit to be written.

16. An apparatus according to claim 15, wherein said mark area is a pit area and
30 said apparatus is arranged to form a pillar portion or a hole within said pit area.

17. An apparatus according to claim 15 or 16, wherein said apparatus is arranged to write a multi-level coded information by controlling the shape or number of said incomplete mark areas in accordance with the level of said multi-level coded information.

18. A record carrier on which an information is written in the form of mark areas corresponding to a predetermined state of said information, wherein the shape of said mark areas is modulated in a predetermined manner so as to obtain incomplete mark areas which
5 do only partly cover the area of the medium associated with the channel bit to be written.
19. A record carrier according to claim 18, wherein said incomplete mark area is a pit area comprises a pillar portion or a hole.
- 10 20. A record carrier according to claim 18 or 19, wherein said information is a multi-level coded information, and wherein the shape or number of said incomplete mark areas defines a level of said multi-level coded information.